

CLAIMS

What we claim is:

1. A method of producing polypropylene tape fibers comprising the sequential steps of
 - a) extruding a heated formulation of polypropylene comprising at most about 2000 ppm, preferably at most about 1500 ppm, more preferably at most about 1000 ppm, and most preferably below about 800 ppm, of a nucleator compound into a film or tube;
 - b) immediately quenching the film or tube of step "a" to a temperature which prevents orientation of polypropylene crystals therein;
 - c) slitting said film or tube with cutting means oriented longitudinally to said film or tube thereby to produce individual tape fibers therefrom;
 - d) mechanically drawing said individual tape fibers at a draw ratio of at least 5:1 while exposing said fibers to a temperature of at between 250 and 360°C, preferably between 260 and 330°C, and most preferably between 270 and 300°C, thereby permitting crystal orientation of the polypropylene therein.
2. The method of Claim 1 wherein the amount of nucleator compound present in step "a" is at most about 1500 ppm.
3. The method of Claim 2 wherein the amount of nucleator compound present in step "a" is at most about 1000 ppm.
4. The method of Claim 3 wherein the amount of nucleator compound present in step "a" is at most about 800 ppm.

5. The method of Claim 1 wherein the drawing temperature of step “e” is between 250 and 360°C.
6. The method of Claim 5 wherein the drawing temperature of step “e” is between 260 and 330°C.
7. The method of Claim 6 wherein the drawing temperature of step “e” is between 270 and 300°C.
8. The method of Claim 2 wherein the drawing temperature of step “e” is between 250 and 360°C.
9. The method of Claim 3 wherein the drawing temperature of step “e” is between 260 and 330°C.
10. The method of Claim 4 wherein the drawing temperature of step “e” is between 270 and 300°C.